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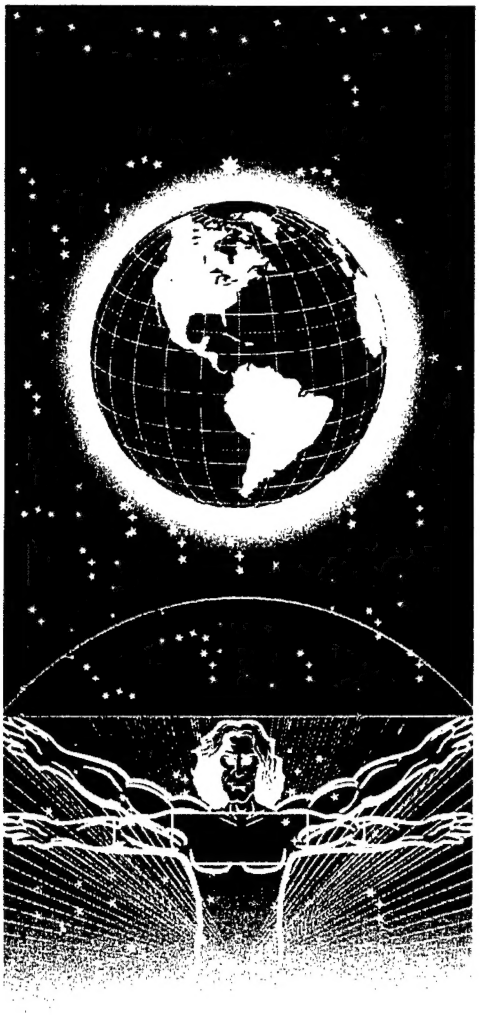

UNITED STATES AIR FORCE
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C-130 Confined Space Technical Guidance Document

Sophia Kapranos

Pacific Environmental Services, Inc.
560 Herndon Parkway, Suite 200
Herndon, VA 20170-5240

Joseph Costantino, Captain, USAF, BSC
Tammy J. Hintz, Staff Sergeant, USAF

August 2002

Air Force Institute for Environment, Safety
and Occupational Health Risk Analysis
Risk Analysis Directorate
Health and Safety Division
2513 Kennedy Circle
Brooks Air Force Base TX 78235-5116

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Robert B Shumate

ROBERT B. SHUMATE, LtC, USAF, BSC
Chief, Health and Safety Division

MOHAMMAD A. HOSSAIN, Col, USAF, BSC
Director, Risk Analysis Directorate

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Joseph Costantino, Captain, USAF, BSC
Tammy Hintz, Staff Sergeant, USAF
*Sophia Kapranos, Industrial Hygienist

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*Pacific Environmental Services, Inc
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The following information and instructions apply to permit-required and nonpermit-required confined spaces associated with the C-130 aircraft. The majority of activities conducted within these spaces are for inspections and routine scheduled maintenance only. Flightline, depot, and other related activities are not referenced in this document. The information presented for each space type is based on the dimensions, inner characteristics, and interviews with shop personnel. Personnel performing aircraft maintenance and support are extensively trained in safe work practices, and work is conducted in accordance with (IAW) strict Technical Order (TO) and Operating Instruction (OI) directives. The TOs and OIs govern procedures such as lockout/tagout and system checks prior to entering the various areas of an aircraft.

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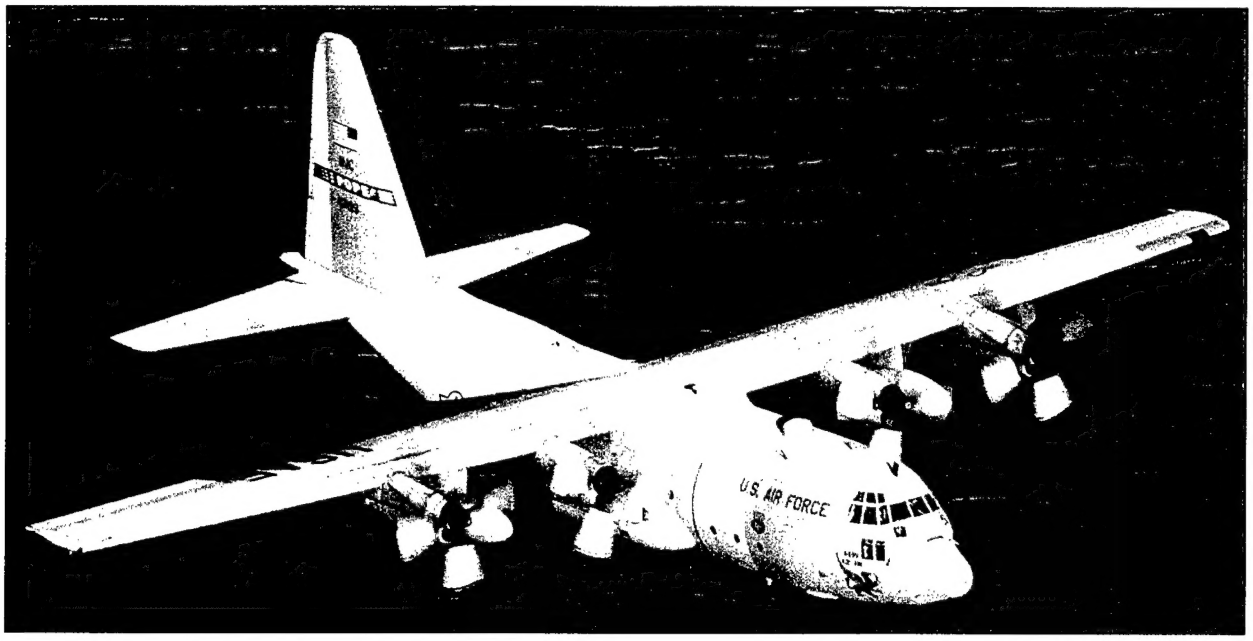


Figure 1. C-130 Hercules

INTRODUCTION

The Confined Space Technical Guidance Document is not a standardized compliance document. For specific compliance procedures, refer to AFOSH Standard 91-25, *Confined Spaces*; OSHA Standard 29 CFR 1910.146, *Permit-Required Confined Spaces*; and all other applicable AFOSH Standards, Technical Orders (TOs), and Operating Instructions (OIs). The following information and instructions apply to permit-required and nonpermit-required confined spaces associated with the C-130 aircraft.

The majority of activities conducted within these spaces are for inspections and routine scheduled maintenance only. Flightline, depot, and other related activities are not referenced in this document. The information presented for each space type is based on the dimensions, inner characteristics, and interviews with shop personnel. Personnel performing aircraft maintenance and support are extensively trained in safe work practices, and work is conducted in accordance with (IAW) strict TO and OI directives. The TOs and OIs govern procedures such as lockout/tagout and system checks prior to entering the various areas of an aircraft. The following table, *C-130 Space Classification*, lists the classification of each space assessed on the C-130.

TABLE 1. C-130 Space Classification

C-130 Space Classification		
Space Type	**Classification**	**Page Number**
Integral Fuel Tanks & Fuel Cells [Left/Right]:	CP	4
• Outboard Main - #1/#4		8
• Inboard Main - #2/#3		9
• External		10
• Fuel Cells		11
Dry Bays:	CP	12
• Outboard - #1/#4		16
• Inboard - #2/#3		17
• Center		18
Avionics Bay	CS	19
Engine Intake	CS	21
NOTE: CS = Confined Space, CP = Permit-Required Confined Space, NC = Not a Confined Space.		

CLASSIFICATION CRITERIA

A space is classified as a "confined space" when it meets the criteria established by AFOSH Standard 91-25, *Confined Spaces*, and OSHA Standard 29 CFR 1910.146, *Permit-Required Confined Spaces*. ALL of the following criteria must be met in order to classified a space as a confined space:

- the space is large enough to bodily enter and perform work, and
- the space has a limited means of entry and egress, and
- the space is not designed for continuous employee occupancy.

For each confined space, only one of the following criteria must be met in order to classify a confined space as permit-required:

- contains or has the potential to contain a hazardous atmosphere, or
- contains a material that has the potential for engulfing the entrant, or
- has an internal configuration such that an entrant could be trapped or asphyxiated, or
- contains any other recognized serious safety or health hazards.

RECOMMENDED ATMOSPHERIC MONITORING

It is considered a good working practice to test the atmosphere in all confined spaces, both "permit required" and "non-permit required", prior to entry. The person designated to conduct atmospheric tests of confined spaces must be trained in operation, calibration, and maintenance of the testing equipment to include field calibration prior to each use. This may involve zero calibrating the instrument in clean air and using span gases for point calibrations. The atmospheric testing equipment must have a current calibration performed by the Test Measurement Diagnostic Equipment (TDME) lab or the manufacturer. The following atmospheric air monitoring must be conducted prior to permit-required confined space entries:

- **Oxygen (O_2):** The concentration of oxygen in the confined space must be greater than or equal to 19.5 percent and less than or equal to 23.5 percent.

- **Flammability:** The concentration of flammable or combustible vapors, gas, or mist in the confined space must be less than or equal to 10 percent of the Lower Explosive Limit (LEL).

- **Toxic Materials:** Atmospheric concentration of any chemical substance must be below that level which may cause death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects.

During normal operations, entries must not be conducted when immediately dangerous to life and health (IDLH) conditions exist. Exceptions to this rule are found in AFOSH Standard 91-25, *Confined Spaces*, paragraph 4.3.

C-130 HERCULES

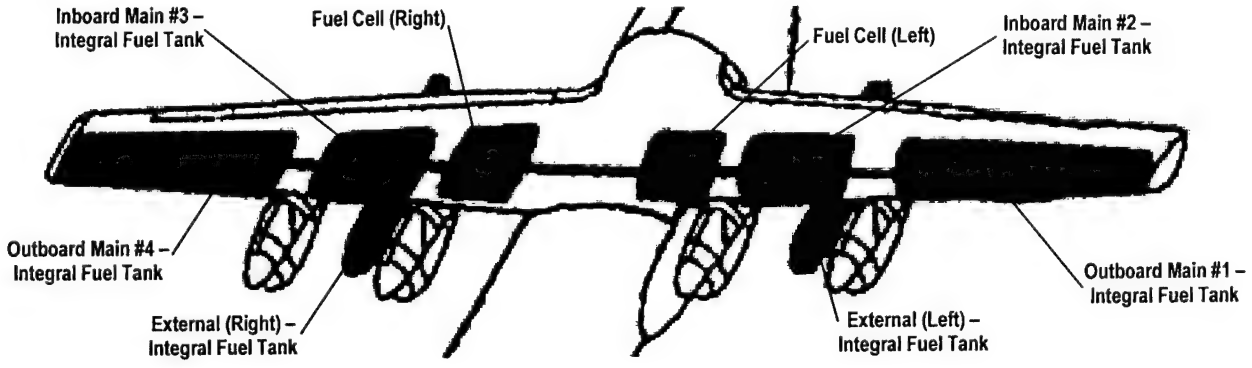
INTEGRAL FUEL TANKS & FUEL CELLS – GENERAL CONDITIONS & REQUIRED PROCEDURES

SPACE DESCRIPTION

The C-130 aircraft contains six integral fuel tanks and two fuel cells. Four of the six integral fuel tanks are located in the wings (two in each wing), and two are located in external tanks underneath the wings (one under each wing). There is a single fuel cell in each wing (two fuel cells total). Integral fuel tanks were developed because they offer the capacity of greater fuel containment with a decrease in weight over a fuel cell type construction. The integral fuel tanks are designed with seal planes instead of fuel bladders and foam (like the fuel cells) for retaining the fuel. Seal planes provide airtight dividers between the surrounding sides of the integral fuel tanks. They are sealed with gaskets, structural adhesives, elastic films, or other sealants. The fuel lines/components within the fuel cells are located between the inner wall of the fuel cell and the outside of the removable bladder that contains the fuel. The C-130 integral fuel tanks and fuel cells can contain fuel lines and various fuel components.

Confined space entries into the integral fuel tanks and fuel cells are performed IAW TO 1-1-3, *Inspection and Repair of Aircraft Integral Tanks and Fuel Cells, 30 November 1994*. The TO includes the following information regarding integral fuel tanks and fuel cells:

- Entering integral fuel tanks and fuel cells that have been depuddled, purged, docked, and grounded.
- Identifies specific repair/rework procedures, equipment, and chemicals, which are authorized for use during entries into integral fuel tanks and fuel cells.
- Outlines specific safety procedures such as ventilation, personal protective equipment, emergency equipment, etc.



TASKS PERFORMED WITHIN THE SPACE

Personnel from several work centers can enter the integral fuel tanks and fuel cells to perform both general and emergency maintenance activities. These work centers may include Aircraft Structural Repair, Non-Destructive Inspection Maintenance, Isochronal (ISO) Dock, etc. The majority of activities conducted within this space are for inspections and routine scheduled maintenance only, and no chemicals are used. Flightline, depot, and other related activities are not referenced in this document. However, some tasks performed during aircraft structural repair and ISO Dock maintenance, may require the use of various solvents, cleaners, adhesives, paints, and primers. The following lists scheduled routine maintenance conducted predominantly by the Fuel Systems shop:

- Performing procedures intended to remove, close, and reinstall integral tanks, fuel cells, or the rubber fuel bladder.

- Removal and reinstallation of plumbing for various fuel systems, other plumbing systems, fuel cell bladders, fuel cell foam, and other related components.

- Cleaning, testing, troubleshooting, and repairing fuel tanks, bladders, and cell cavities. This includes the application of solvents, cleaners, and adhesives.

Only authorized materials, or materials which have been fully evaluated and approved by Installation Ground Safety (SEG), Installation Fire Department (CEF), and Bioenvironmental Engineering (BE) offices can be used within the integral fuel tanks and fuel cells. Hot work, such as grinding, welding or brazing in a permit-required confined space requires a confined space entry permit AND a hot work permit. Both permits must be reviewed and approved in writing by SEG, CEF, and BE prior to conducting any hot work in the space.

POTENTIAL HAZARDS

The following table, *Potential Hazards*, contains various hazards that could be encountered when performing permit-required confined space entries into the integral fuel tanks and fuel cells. The systems described in the table are closed/contained, and are hazardous if they are intentionally opened or a significant leak occurs. These conditions are unlikely due to personnel training and specific aircraft TOs and OIs that are strictly complied with. The TOs and OIs govern procedures such as lockout/tagout and system checks prior to entering the various areas of the aircraft.

TABLE 2. Potential Hazards (Integral Fuel Tanks & Fuel Cells-General)

POTENTIAL HAZARDS	
Hazard	**Hazard Description**
Combustibility	The integral fuel tanks and fuel cells have the potential to contain jet fuel and/or jet fuel vapors that are combustible.
Entrapment	The integral fuel tanks and fuel cells are extremely confined areas that contain several structural braces and fuel components throughout the space. This creates an entrapment hazard for entry personnel due to limited maneuverability and delayed egress.
Hazardous Materials Present	Jet fuel and/or fuel vapors may be present. Jet fuel and its constituents (e.g., benzene, toluene, xylene) can be a potential hazard to the entrant by route of inhalation, skin absorption, ingestion, and contact.
Introduction of Hazardous Materials	The solvents and cleaners that are used for cleaning in the tanks, and adhesives used to seal the tanks, could potentially include hazardous materials. Only authorized chemicals should be used within the integral fuel tanks and fuel cells.
Oxygen Deficiency	Due to unfavorable ventilation and the possible presence of jet fuel vapors that can displace the oxygen in these areas, oxygen deficiency is a potential hazard. In addition, several operations are performed within the space that requires the use of solvents, cleaners, and/or adhesives. Depending on the quantity and duration of use, the constituents of the chemicals could displace the oxygen within the space.
Temperature Extremes	Temperature extremes may present a hazard due to one or a combination of several factors such as ambient temperature, radiant heat, local winds, support equipment, and PPE.
Unfavorable Natural Ventilation	Due to the small entrances and confined areas, there is normally minimal natural ventilation within these spaces.

RECOMMENDED ENGINEERING/ADMINISTRATIVE CONTROLS

The following engineering and administrative controls should be in place prior to making permit-required confined space entries into integral fuel tanks and fuel cells:

- **Depuddling:** Fuel tanks and fuel cells will be defueled, drained, depuddled, and purged to the extent necessary to perform the required tasks.

- **Electrical:** Except for specific depot exclusions, the aircraft electrical system shall be deenergized and locked and tagged out prior to opening integral fuel tanks and fuel cells. The aircraft should also be grounded and bonded prior to entry.

- **Lockout/Tagout:** Lockout/tagout procedures must be performed on electrical and mechanical systems prior to entry. Danger tags are placed on the relevant circuit breakers, batteries, and external power. Restricted areas are established to minimize foot traffic.

- **Ventilation:** Fuel tanks and fuel cells shall be ventilated for 30 minutes prior to space occupancy and continuously during entry. Ventilation must be used as necessary to ensure safe atmospheric conditions during entry.

- **Administrative:** Personnel should minimize the time spent in confined spaces by performing only necessary tasks within the space. Any work that can be conducted outside of the space should not be performed during the entry.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE must be assigned based on the atmospheric conditions of the confined space, the physical hazards present, the task being performed, and the hazardous materials being used. Protective equipment that may be used for tasks in this space include:

- respiratory protection,
- non-absorbent coveralls,
- approved footwear,
- nitrile/neoprene gloves or gloves for sealant operations,
- cap or head covering,
- goggles or safety glasses with side shields, and
- neoprene rubber kneepads, elbow pads, or mats.

RECOMMENDED EMERGENCY EQUIPMENT

The following emergency equipment is recommended to be present in the Fuels or Flightline Maintenance area and verified to be in working condition by the designated entry authority prior to authorizing permit-required confined space entries:

- intrinsically safe hand radio,

- 150 pound halon fire extinguisher,

- intrinsically safe flashlights, lamps, or lanterns rated for class I, division 1 hazardous atmospheres,

- additional respiratory protection as recommended by BE, and

- rescue webbing harness.

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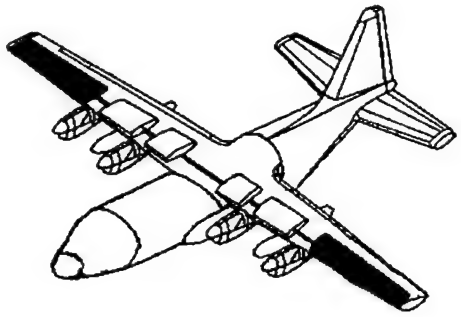

INTEGRAL FUEL TANKS – OUTBOARD MAIN (1, 4)

SPACE DESCRIPTION

There is a single outboard main integral fuel tank (1, 4) in each wing of the C-130 aircraft (two fuel tanks total) that can be entered completely by maintenance personnel. The main integral fuel tanks feed fuel to the engines. They are located at the tip of the wings. Each tank contains fuel lines and fuel components.

INNER DIMENSIONS

Height = 2.0'
Length = 6.0'
Depth = 6.0'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS

Each outboard main integral fuel tank has a single access that is located on top of the wing.

RECOMMENDED CLASSIFICATION

Permit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

The outboard main integral fuel tanks are permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

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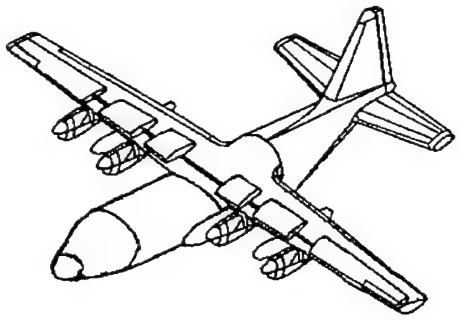

INTEGRAL FUEL TANKS – INBOARD MAIN (2, 3)

SPACE DESCRIPTION

There is a single inboard main integral fuel tank (2, 3) in each wing of the C-130 aircraft (two fuel tanks total) that can be entered completely by maintenance personnel. The main integral fuel tanks feed fuel to the engines. They are located between the outboard and inboard dry bays. Each tank contains fuel lines and fuel components.

INNER DIMENSIONS

Height = 14.0'
Length = 8.0'
Depth = 2.5'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS

Each inward main integral fuel tank has a single access that is located on top of the wing.

RECOMMENDED CLASSIFICATION

Permit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

The inboard main integral fuel tanks are permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

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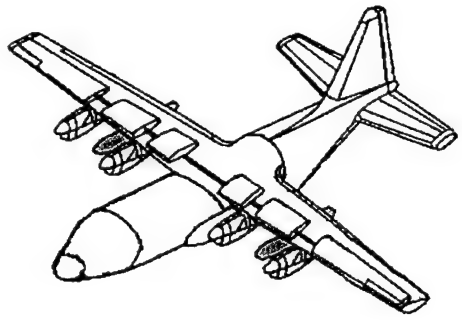

INTEGRAL FUEL TANKS – EXTERNAL (LEFT/RIGHT)

SPACE DESCRIPTION

There is a single external integral fuel tank underneath each wing of the C-130 aircraft (two fuel tanks total) that can be entered completely by maintenance personnel. The external fuel tanks contain fuel lines and fuel components. Each tank has 1,290 gallon capacity.

INNER DIMENSIONS

Height = 5.0'
Length = 5.0'
Depth = 10.0'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS/INNER AREA

Each external integral fuel tank has a single access located on the side of the tank. Maintenance personnel normally use an elevated stand to access this door from the ground.

RECOMMENDED CLASSIFICATION

Permit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

The external integral fuel tanks are permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

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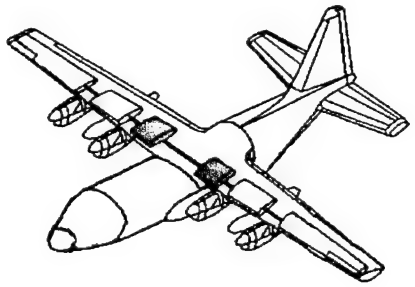

FUEL CELLS (LEFT/RIGHT)

SPACE DESCRIPTION

There is a single fuel cell in each wing of the C-130 aircraft (two fuel cells total) that can be entered completely by maintenance personnel. The fuel cells contain a fuel bladder, fuel lines, and fuel components.

INNER DIMENSIONS

Height = 7.0'
Length = 10.0'
Depth = 4.0'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS/INNER AREA

Each fuel cell has a single access located on top of the wing.

RECOMMENDED CLASSIFICATION

Permit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

The fuel cells are permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

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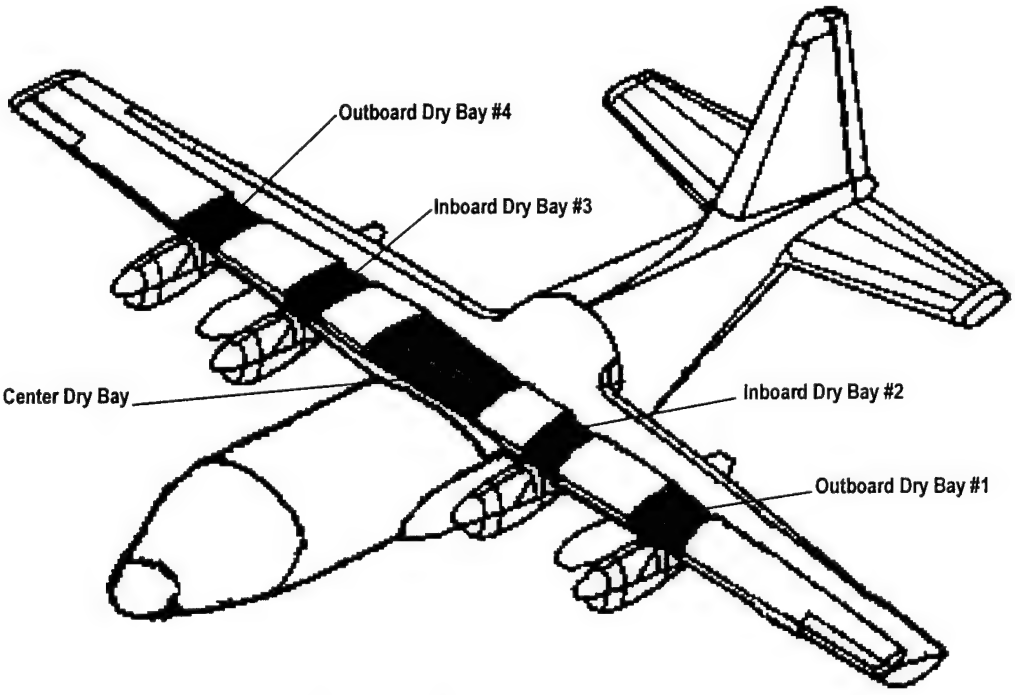
DRY BAYS – GENERAL CONDITIONS AND REQUIRED PROCEDURES

SPACE DESCRIPTION

The C-130 aircraft contains 5 dry bays. Two are located in each wing, and one is located between the wings. Dry bays are the integral areas of the aircraft wing located between the integral fuel tanks. The dry bays are designed with seal planes, which provide airtight dividers between the surrounding sides of the fuel tanks and dry bays. They are sealed with gaskets, structural adhesives, elastic films, or other sealants.



TASKS PERFORMED WITHIN THE SPACE

Personnel from several work centers can enter the dry bays to perform both general and emergency maintenance activities. These work centers may include Aircraft Structural Repair, Non-Destructive Inspection Maintenance, ISO Dock, etc. The majority of activities conducted within this space are for inspections and routine scheduled maintenance only, and no chemicals are used. Flightline, depot, and other related activities are not referenced in this document. However, some tasks performed during aircraft structural repair and ISO Dock maintenance, may require the use of various solvents, cleaners, adhesives, paints, and primers. The following lists scheduled routine maintenance conducted predominantly by the Fuel Systems shop:

- Removal and reinstallation of plumbing for various fuel systems.

- Cleaning, testing, troubleshooting, and repairing dry bay cavities. This includes the application of solvents, cleaners, and adhesives.

Only authorized materials, or materials, which have been fully evaluated and approved by SEG, CEF, and BE offices can be used within the integral fuel tanks and fuel cells. Hot work, such as grinding, welding or brazing in a permit-required confined space requires a confined space entry permit AND a hot work permit. Both permits must be reviewed and approved in writing by SEG, CEF, and BE prior to conducting any hot work in the space.

POTENTIAL HAZARDS

The following table, *Potential Hazards*, contains various hazards that could be encountered when performing permit-required confined space entries into the dry bays. The systems described in the table are closed/contained, and are hazardous if they are intentionally opened or a significant leak occurs. These conditions are unlikely due to personnel training and specific aircraft TOs and OIs that are strictly complied with. The TOs and OIs govern procedures such as lockout/tagout and system checks prior to entering the various areas of the aircraft.

TABLE 3. Potential Hazards (Dry Bays-General)

POTENTIAL HAZARDS	
Hazard	**Hazard Description**
Combustibility	The dry bays have the potential to contain jet fuel and/or jet fuel vapors that are combustible.
Entrapment	The dry bays are extremely confined areas that contain several structural braces and fuel piping/pumps/valves throughout the space. This creates an entrapment hazard for entry personnel due to limited maneuverability and delayed egress.
Hazardous Materials Present	Jet fuel and/or fuel vapors may be present. Jet fuel and its constituents (e.g., benzene, toluene, xylene) can be a potential hazard to the entrant by route of inhalation, skin absorption, ingestion, and contact.
Introduction of Hazardous Materials	The solvents and cleaners that are used for cleaning the dry bays, and adhesives that are used for sealing, could potentially include hazardous materials. Only authorized chemicals should be used within the dry bays.
Oxygen Deficiency	Due to unfavorable ventilation and the possible presence of jet fuel vapors, which can displace the oxygen in these areas, oxygen deficiency is a potential hazard. In addition, several operations are performed within the fuel cavities that require the use of solvents, cleaners, and/or adhesives. Depending on the quantity and duration of use, the constituents of the chemicals could displace the oxygen within the space.
Temperature Extremes	Temperature extremes may present a hazard due to one or a combination of several factors such as ambient temperature, radiant heat, local winds, support equipment, and PPE.
Unfavorable Natural Ventilation	Due to the small entry access into the dry bays, there is normally minimal natural ventilation within these spaces.

RECOMMENDED ENGINEERING/ADMINISTRATIVE CONTROLS

The following engineering and administrative controls should be in place prior to making permit-required confined space entries into the dry bays:

- **Lockout/Tagout:** Lockout/tagout procedures must be performed on electrical and mechanical systems prior to entry. Danger tags are placed on the relevant circuit breakers, batteries, and external power. Restricted areas are established to minimize foot traffic.

- **Ventilation:** Ventilating a confined space before entry is not necessary if atmospheric monitoring results are acceptable. Atmospheric monitoring will be performed prior to entry and continuously thereafter. However, the entry authority can and should use ventilators to maintain acceptable air quality within the space during the entry if necessary.

- **Administrative:** Personnel should minimize the time spent in confined spaces by performing only necessary tasks within the space. Any work that can be conducted outside of the space should not be performed during the entry.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE must be assigned based on the atmospheric conditions of the confined space, the physical hazards present, the task being performed, and the hazardous materials being used. Protective equipment that may be used for tasks in this space include:

- respiratory protection,
- coveralls,
- approved footwear,
- nitrile/neoprene gloves or gloves for sealant operations,
- cap or head covering,
- goggles or safety glasses with side shields, and
- neoprene rubber knee pads, elbow pads, or mats.

RECOMMENDED EMERGENCY EQUIPMENT

The following emergency equipment is recommended to be present in the Fuels or Flightline Maintenance area and verified to be in working condition by the designated entry authority prior to authorizing confined space entries:

- intrinsically safe hand radio,

- 150 pound halon fire extinguisher,

- intrinsically safe flashlights, lamps, or lanterns rated for class I, division 1 hazardous atmospheres,
- additional respiratory protection as recommended by BE, and
- rescue webbing harness.

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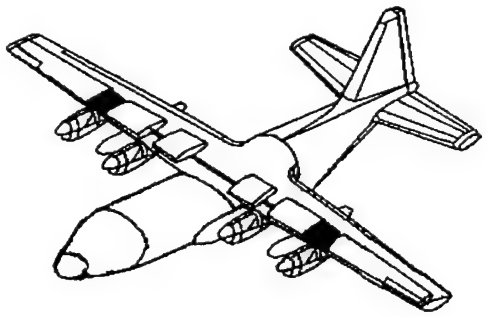


DRY BAYS – OUTBOARD (1, 4)

SPACE DESCRIPTION

There is a single outboard dry bay (1, 4) in each wing of the C-130 aircraft (two dry bays total) that can be entered completely by maintenance personnel. They are located between the outboard and inboard main integral fuel tanks. Each outboard dry bay contains fuel lines and fuel components.

INNER DIMENSIONS

Height = 6.0'
Length = 6.0'
Depth = 2.5'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS/INNER AREA

Each outboard dry bay has a single access located on top of the wing.

RECOMMENDED CLASSIFICATION

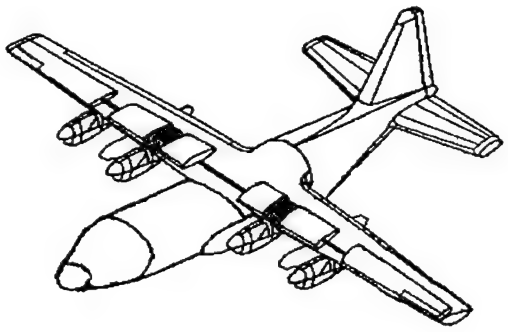
Permit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

The outboard dry bays are a permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

C-130 HERCULES



DRY BAYS – INBOARD (2, 3)

SPACE DESCRIPTION

There is a single inboard dry bay (2, 3) in each wing of the C-130 aircraft (two dry bays total) that can be entered completely by maintenance personnel. They are located between the inboard main integral fuel tanks (2, 3) and the fuel cells (left/right). Each inboard dry bay contains fuel lines and fuel components.

INNER DIMENSIONS

Height = 8.0'
Length = 5.0'
Depth = 2.5'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS/INNER AREA

Each inboard dry bay has a single access located on top of the wing.

RECOMMENDED CLASSIFICATION

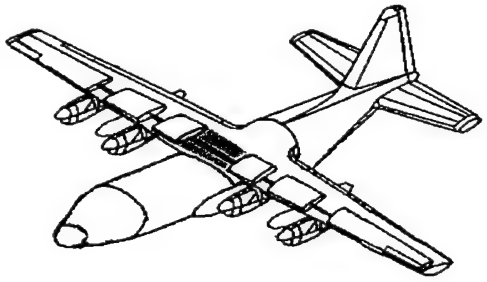
Permit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

The inboard dry bays are permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

C-130 HERCULES



DRY BAY – CENTER

SPACE DESCRIPTION

There is a single center dry bay that can be entered completely by maintenance personnel. It located between the fuel cells (left/right). The center dry bay contains fuel lines and fuel components.

INNER DIMENSIONS

Height = 8.0'
Length = 10.0'
Depth = 3.0'

ENTRY DIMENSIONS

Length = 1.5'
Width = 2.0'
(oval entrance)

[The depth is the distance from the entrance to the most distant point.]

SPACE ACCESS/INNER AREA

The center dry bay has a single access located on top of the wing.

RECOMMENDED CLASSIFICATION

Permit-required confined space.

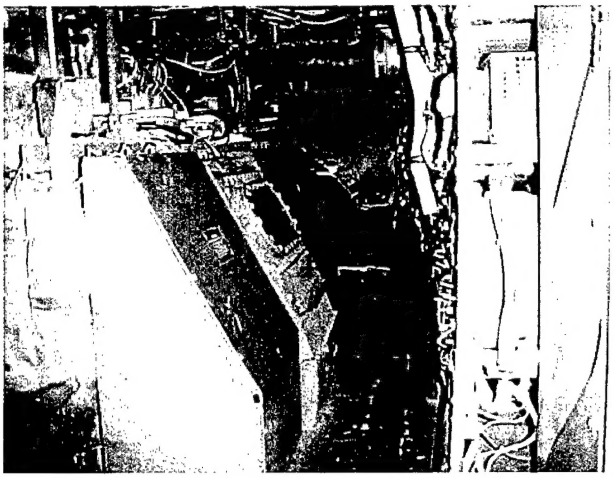
JUSTIFICATION FOR CLASSIFICATION

The center dry bay is permit-required due to the following conditions:

- contains or has the potential to contain a hazardous atmosphere (e.g., fuel and its constituents), and
- has an internal configuration such that an entrant could be trapped or asphyxiated (e.g., limited space congested with fuel lines and support braces/ribs).

C-130 HERCULES

ELECTRONIC EQUIPMENT BAY



SPACE DESCRIPTION

There is an avionics/electronic equipment bay located directly under the flight deck and is accessible by maintenance personnel. There are no fuel or hydraulic lines within the space.

SPACE ACCESS/INNER AREA

The space is accessed from the door leading to the flight deck.

RECOMMENDED CLASSIFICATION

Nonpermit-required confined space.

JUSTIFICATION FOR CLASSIFICATION

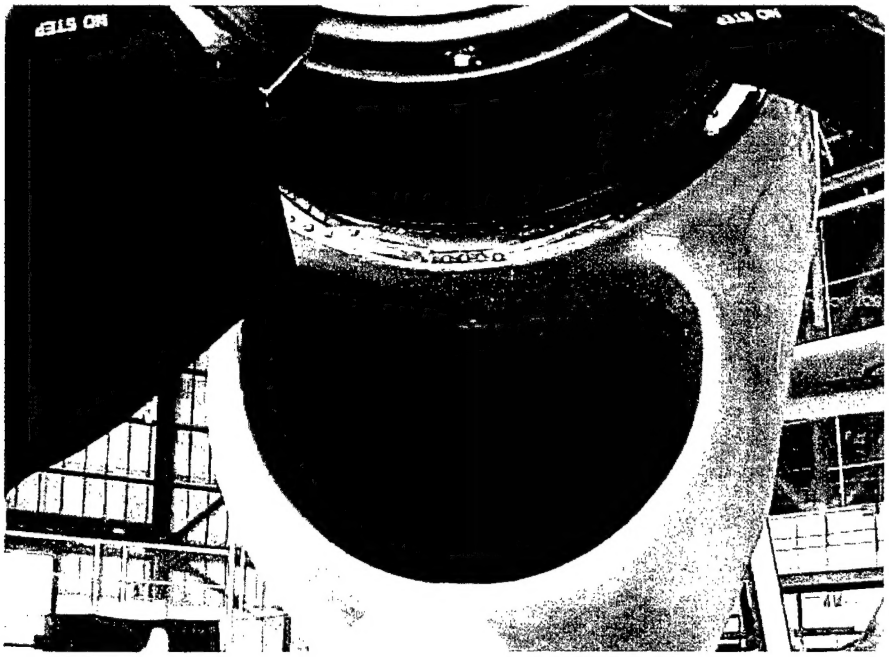
The space contains a variety of closed/contained systems (electronic) that do not present CREDIBLE potential hazards, and therefore is not a permit-required confined space. The systems may be hazardous if they are intentionally left on or open. These conditions are unlikely due to personnel training and specific aircraft TOs and OIs that personnel are strictly required to comply with. The TOs and OIs govern procedures such as lockout/tagout and system checks prior to entering the various areas of the aircraft.

TASKS PERFORMED WITHIN THE SPACE

Personnel from several work centers may enter the electronics bay to perform both general and emergency maintenance activities. These work centers may include Aircraft Structural Repair, Non-Destructive Inspection Maintenance, Electro-environmental, Avionics, and ISO Dock. The primary activities conducted within this space are inspections and routine scheduled maintenance, and no chemicals are used. Flightline, depot, and other related activities are not referenced in this document. However, some non-routine tasks performed during aircraft structural repair and ISO Dock maintenance, may require the use of various solvents, cleaners, adhesives, paints, and primers. Only authorized materials, or materials that have been fully evaluated and approved by SEG, CEF, and BE offices can be used within the electronics bay.

C-130 HERCULES

ENGINE INTAKES



SPACE DESCRIPTION

Each side of the C-130 aircraft has two turbo-prop engines. All four of these engines have identical intake spaces that have a half-moon shape and are approximately 4 feet deep. The engine intake space ends at the engine blades. The inlets are free of obstructions (veins, supports, etc.), but the ends of the inlets are elevated (approximately 1').

SPACE ACCESS/INNER AREA

The engine intakes are accessed directly underneath the propeller blades of each engine. The blades are in the 'X' configuration for this type of entry.

RECOMMENDED CLASSIFICATION

Nonpermit-required confined space

JUSTIFICATION FOR CLASSIFICATION

There are no aircraft systems within this space. There are not any CREDIBLE potential hazards within the spaces. The TOs and OIs that govern work in these areas help insure that no CREDIBLE hazards will be present in these spaces.

TASKS PERFORMED WITHIN THE SPACE

The main task performed with in this space is the inspection of the engine blades. Occasionally, it may be necessary for personnel to clean the blades with a soap and water solution. Some routine maintenance tasks are conducted within this space, but these tasks are mechanical in nature and do not require the use of chemicals. However, some NDI tasks may require the use of small quantities of chemicals in these spaces. Only authorized materials that have been fully evaluated and approved by SEG, CEF, and BE offices can be used within the engine intakes.